IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

January 29, 2010

Governor Chester Culver
State Capitol
LOCAL

Dear Governor Culver:

Pursuant to Iowa Code Chapter 466A Section 3, Item 3e, the Watershed Improvement Review Board is submitting its annual report. Copies of this report are being provided to the President of the Senate and the Speaker of the House. An electronic copy of the report is also being provided to your office and the President of the Senate and Speaker of the House per the requirements of Chapter 466A.

The Board, codified in Chapter 466A, is an independent, self-governing body directed to award grants for water quality improvement and flood prevention in the state. The Board is authorized to request applications from soil and water conservation districts, local watershed improvement committees, public water supply utilities, counties, county conservation boards and cities and award grants to these entities. These grants are issued from the Watershed Improvement Fund.

Annual appropriations of $5 million plus interest earned on the Watershed Improvement Fund allowed the Board to issue two Request For Applications in 2009. On February 27, the Board awarded grants to seven applicants for a total of $2,366,861. On September 21, the Board awarded grants to thirteen applicants for a total of $5,120,832. In addition to providing environmental benefits, these implementation projects stimulate economic recovery and create jobs through the purchasing of local goods and services.

The Board extends its gratitude to the Governor and the General Assembly for supporting this visionary effort to improve water quality and prevent flooding and is looking forward to continuing and expanding upon this initiative.

Sincerely,

Mark Rosenbury

Mark Rosenbury, Chair
Watershed Improvement Review Board

Cc: Bill Northey
Karey Claghorn
Members, Watershed Improvement Review Board

MR:jgn

IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

January 29, 2010

John P. Kibbe
President of the Senate
State Capitol
LOCAL

Pat Murphy
Speaker of the House
State Capitol
LOCAL

Dear Senator Kibbe and Representative Murphy:

Pursuant to Iowa Code Chapter 466A Section 3, Item 3e, the Watershed Improvement Review Board is submitting its annual report. A copy of this report is being provided to the Governor. An electronic copy of the report is also being provided to your offices and the Governor per the requirements of Chapter 466A.

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Mark Rosenbury, Chair
Watershed Improvement Review Board

Cc: Bill Northey
Karey Claghorn
Members, Watershed Improvement Review Board

MR:jgn

Watershed Improvement Review Board
Calendar Year 2009 Annual Report

Submitted January 29, 2010

The Iowa Watershed Improvement Review Board (WIRB) was created by the Iowa Legislature and signed into law by the Governor in 2005 as Senate File 200. This statute is now codified in Iowa Code Chapter 466A.

The fifteen-member Board conducted nine meetings throughout the year in-person or via teleconference. Meetings were held January 23, February 27, April 24, May 21, June 19, August 7, September 21, November 6, and December 18. Attachment 3 lists the board members and their organization affiliation.

The Board completed two Request For Applications (RFAs) for the Watershed Improvement Fund. The first RFA was announced October 8, 2008 and closed January 30, 2009. The second RFA was announced June 25, 2009 and closed August 14, 2009.

January 30, 2009 Closing Date Request For Applications: The Board received 10 applications in response to this RFA. These applications requested $3.4 million in Watershed Improvement Funds and leveraged an additional $8.1 million for a total of $11.5 million of watershed project activity proposed.

On February 27, after reviewing and ranking the applications individually from this RFA, the Board met and selected seven applications for funding. The seven projects were approved for $2,366,861 of Watershed Improvement Funds. Data on the seven selected projects in this RFA include the following:

- These projects included portions of eight counties
- The $2.36 million requested of Watershed Improvement Funds leveraged an additional $5.07 million for a total of $7.43 million
- Selected individual projects were approved for funding between $124,375 to $500,000

Attachment 1a lists the approved projects name, applicant name, county or counties where located, and funding amount for the January 30, 2009 closing date RFA.

August 14, 2009 Closing Date Request For Applications: The Board received 26 applications in response to this RFA. These applications requested $10.8 million in Watershed Improvement Funds and leveraged an additional $24.9 million for a total of $35.7 million of watershed project activity proposed.

On September 21, after reviewing and ranking the applications individually from this RFA, the Board met and selected thirteen applications for funding. The thirteen projects were approved for $5,120,832 of Watershed Improvement Funds. Data on the thirteen selected projects in this RFA include the following:

- These projects included portions of twenty counties
- The $5.12 million requested of Watershed Improvement Funds leveraged an additional $13.36 million for a total of $18.48 million
- Selected individual projects were approved for funding between $201,660 to $500,000

Attachment 1b lists the approved projects name, applicant name, county or counties where located, and funding amount for the August 14, 2009 closing date RFA.

With funds remaining unobligated from the August 14, 2009 closing date RFA, another RFA was announced October 13, 2009. This RFA closed January 15, 2010.

In cooperation with the Treasurer of State, submitted the Fiscal Year 2009 report for the Rebuild Iowa Infrastructure Fund to the Joint Transportation, Infrastructure and Capitals Appropriations Subcommittee,

the Legislative Services Agency, the Department of Management and the Legislative Capital Projects Committee of the Legislative Council.

Attachment 2 shows the locations of projects completed and the locations of active projects through December 31, 2009.

Attachment 4 contains the annual progress reports from the 49 active projects and projects finished in 2009.

Attachment 1a. Watershed Improvement Fund Grants Awarded From January 30, 2009 RFA

Watershed Name	Organization	Counties Where Located	Funding Amount
Competine Creek	Marion SWCD	Marion	$199,530
DMACC Lake Watershed	Polk SWCD	Polk	$500,000
Duck Creek Watershed	River Action	Scott	$124,375
Remsen Source Water Protection Project	City of Remsen	Plymouth	$160,800
Sands Timber	Taylor SWCD	Taylor	$499,751
Staff Creek and Beaver Creek	Howard SWCD	Howard	$392,950
Walnut Creek	Montgomery SWCD & East Pottawattamie SWCD	Montgomery, Pottawattamie	$489,455

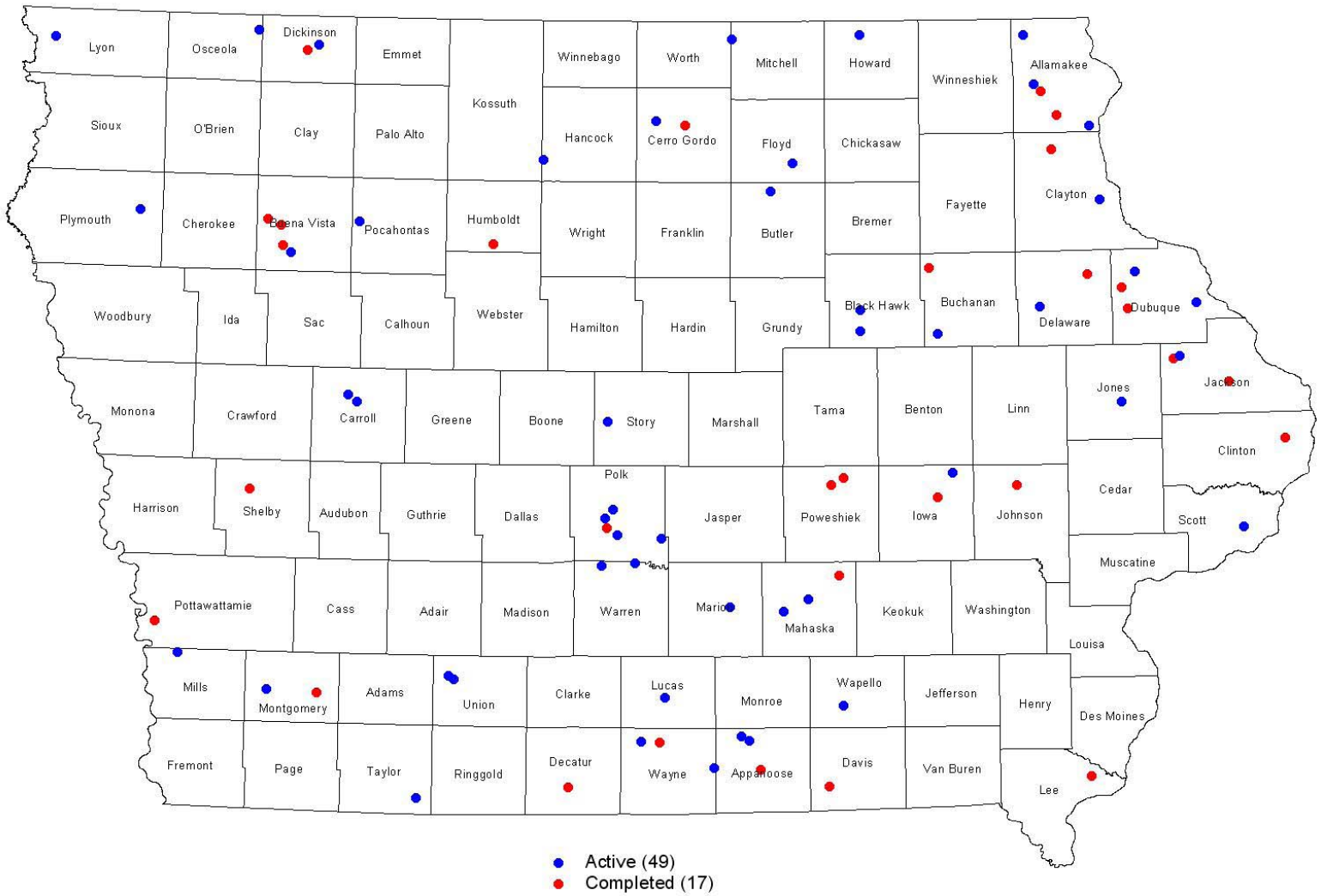
Total Funding Approved by the Watershed Improvement Review Board **$2,366,861**

Attachment 1b. Watershed Improvement Fund Grants Awarded From August 14, 2009 RFA

Watershed Name	Organization	Counties Where Located	Funding Amount
Bear Creek Watershed	Delaware SWCD	Delaware	$347,950
Beaver Creek Watershed	City of Johnston	Polk	$299,518
Fox River	Fox River Ecosystem Development Inc	Appanoose, Davis	$493,750
Hawthorn Lake	Mahaska SWCD	Mahaska	$360,900
Hewitt Creek Watershed	Hewitt Creek Watershed Improvement Assoc. Inc	Dubuque	$482,035
Indian Springs Pond Watershed Project	Allamakee SWCD	Allamakee	$201,660
Little River Lake	Decatur SWCD	Decatur	$423,900
Lost Creek Watershed	Lee SWCD	Lee	$445,800
Lytle Creek	Limestone Bluffs RC&D	Jackson	$500,000
Rathbun Lake Watershed	Rathbun Land and Water Alliance	Appanoose, Clarke, Decatur, Lucas, Monroe, Wayne	$491,800
Silver Creek	Clayton SWCD	Clayton	$365,950
Upper Buffalo Creek Watershed	Buchanan SWCD	Buchanan, Fayette	$494,569
Walnut Creek Watershed	Poweshiek SWCD	Poweshiek	$213,000

Total Funding Approved by the Watershed Improvement Review Board **$5,120,832**

Attachment 2. Active & Completed WIRB Projects (December 2009)



Attachment 3. Appointed Members of the Watershed Improvement Review Board
January 1 - December 31, 2009, Iowa Code Chapter 466A

Name	City	Term Ending	Sponsoring Organization
Mark Rosenbury	West Des Moines	2012	Agribusiness Assn of Iowa
Jolee Belzung	Ankeny	2010	Iowa Assn of Water Agencies
Tom Hadden	Altoona	2012	Iowa Environmental Council
Leah Maass (January—April)	Ellsworth	2009	Iowa Farm Bureau
Vicki Allen (May-December)	Diagonal	2012	Iowa Farm Bureau
Debra Karwal	Elliott	2011	Iowa Pork Producers
Kevin Jacobson	Story City	2010	Iowa Rural Water Assn
Robert Ballou	Monticello	2010	Iowa Soybean Assn
Deb Ryun (January—September)	Chariton	2012	Soil and Water Conservation Districts of Iowa
Keri Van Zante	Newton	2012	Iowa Assn of County Conservation Boards
Jim Gillespie	Earlham	2011	Representative of IDALS
Bernie Hoyer	Des Moines	2011	Representative of DNR
Dennis Black	Grinnell	2011	State Senator
David Johnson	Ocheyedan	2011	State Senator
Betty De Boef	What Cheer	2011	State Representative
Dolores Mertz	Ottosen	2011	State Representative

Attachment 4. 2009 Annual Project Reports Table of Contents

Attachment 4. 2009 Annual Project Reports Table of Contents (continued)

Attachment 4. 2009 Annual Project Reports Table of Contents (continued)

Project Name: Big Bear Creek
Project Sponsor: Jones Soil and Water Conservation District
Length of Project: January 1, 2007 to December 31, 2009

Counties included in the project area: Jones

Total Watershed Improvement Funds awarded for this project:	**$ 455,313.00**
Total Watershed Improvement Funds spent:	**$ 323,693.00**
Total Watershed Improvement Funds obligated:	**$ 60,756.00**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 70,864.00**

Project objectives:

- Administer the Big Bear Creek Watershed Improvement Project to ensure all objectives and activities planned are followed thru with to the best of the Project Coordinators abilities.
- Construct Best Management Practices (BMP's) in the identified high priority areas.
- Reduce sediment delivery and phosphorous loading by 30%.
- Conduct an informational and educational program to increase awareness and knowledge of the Big Bear Creek water quality issues to watershed residents and the local community.
- Monitor the stream using the IOWATER Program and enter data on their web site.

Summary of activities and accomplishments for calendar year 2009

A total of twenty two landowners signed up and were approved by the Commissioners to install water quality BMP's. Sixteen applications were approved under WIRB, four under REPAIR IJOBS and one each under REAP & CRP. Ten projects were completed and certified from the previous year of funding. Four were completed from this years funding. Eleven were started and extended from WIRB funding and all four IJOBS were extended until the spring of 2010. A total of nine approved projects were cancelled, due to the BMP's were not started and the WIRB agreement ended as of 12/31/09. The completed projects for the year have a total sediment delivery reduction of 464 tons and an estimated 603 pounds of phosphorus that were reduced from reaching the stream. The Sediment Delivery Calculator was used to arrive at these figures. All the approved WIRB projects were in the priority areas identified in the grant agreement.

The Project Coordinator (PC) meets with the Watershed Council quarterly to discuss project activities and monitor progress. The Council has anywhere from 3-10 members that attend these meetings. They are very interested in what is going on in the watershed and always ask a lot of questions. Articles submitted by the PC to local media have generated a lot of positive comments from the general public on water quality issues. The two monitoring sites in the watershed were sampled this year and the data was submitted to the IOWATER Program.

Project Name: Big Sioux River Watershed
Project Sponsor: Lyon Soil and Water Conservation District
Length of Project: January 1, 2007 to December 31, 2009

Counties included in the project area: Lyon

Total Watershed Improvement Funds awarded for this project:	**$ 267,800.00**
Total Watershed Improvement Funds spent:	**$ 148,817.78**
Total Watershed Improvement Funds obligated:	**$ 0.00**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 118,982.22**

Project objectives:

- Administer the Lyon Clean Water Project to ensure all objectives and activities planned are implemented.
- Reduce pollutant delivery to water resources by constructing six cost-effective alternative treatment systems for controlling open feedlot runoff that meet or exceed the environmental regulations for pollution control.
- Utilize monitoring processes to measure effectiveness of alternative treatment to meet water quality standards.
- Conduct an information and education program to increase awareness and knowledge of Lyon county water quality problems, impact of open feedlots on water quality, alternative treatments, and relative cost and environmental performance to livestock producers, watershed residents, and the local community.

Summary of accomplishments and water quality outcomes for calendar year 2009

Met with design engineer and participants in the study on an individual basis. Discussed design of each site, practices involved, and funding for each site.

Two sites were constructed. Took pictures of each site to show pre-construction condition, construction activity, and post construction condition.

Worked with participant and state secretary to organize bills and submit for approval for payment.

Completed and submitted required reports.

Held Annual Review meeting.

Held Beef Feedlot Tour and stopped at four sites. Worked with ISU Extension personnel and design engineer to answer questions at each site. A representative of IDALS attended to tour to answer question on low-interest loans.

Iowa DNR Watershed Monitoring and Assessment Section established a monitoring procedure. Samples were taken and submitted to UHL lab for testing. The Monitoring and Assessment Section is analyzing the information.

Project Name: Brushy Creek
Project Sponsor: Des Moines Water Works
Length of Project: January 1, 2009 to December 31, 2011

Counties included in the project area: Carroll

Total Watershed Improvement Funds awarded for this project:	**$ 206,500**
Total Watershed Improvement Funds spent:	**$ 27,522**
Total Watershed Improvement Funds obligated:	**$ 11,142**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 167,836**

Project objectives:

- Begin process of identifying producers: completed.
- Form a Watershed Improvement Association: started but not completed
- Acquire Water Monitoring Data: 2009 goals completed
- Implement Improvement Strategies: ongoing, several have been implemented
- Conduct Cornstalk Nitrogen testing: 2009 goals completed
- Production of Project Summary Reports: 2009 reports completed

Summary of activities and accomplishments for calendar year 2009

Formation of a Watershed Improvement Association: Three Watershed Improvement meetings were held during 2009, in addition to one producer meeting to evaluate corn stalk nitrogen testing. A cohesive group with a leader has not yet formed.

EQIP/Producer Cost Share Projects: Three (3) manure solid settling basins were constructed. One (1) comprehensive nutrient management (CNMP) was completed, and a second is being generated. Terraces were constructed totaling 2500 feet. A total of 4 acres of grass waterways have been constructed.

Monitoring: Characterization of stream water quality was assessed during 2009 by collection and analyses of 338 nitrate, 323 *E. coli*, 40 ammonia samples, 13 phosphorous, 15 total organic carbon, and 13 emerging contaminant samples. In addition, 4 sample events using automated samplers during precipitation events were conducted. Project participants have baseline from which implemented practices can be measured.

Bioreactor: Construction of one bioreactor has begun near the top of watershed and will receive water from a tile that contains the highest nitrate concentration ever measured by the DMWW lab in the Raccoon River watershed. Expectations are that this bioreactor will reduce nitrate loads 60-80% in the water from that tile.

Website: A project website has been created and project information is being posted there: http://www.dmww.com/SubPageHTML.aspx?SubPageID=115

Corn Stalk Nitrogen Testing: Corn stalk nitrogen testing was conducted on 19 fields, which included operations run by 10 different producers. These tests showed elevated (beyond optimal) stalk nitrogen in 42% of the tests; optimal in 18%; marginal in 6%; and low in 33%. Producers can use these and future results to modify their nutrient application rates. This testing will be ongoing throughout the life of the project to assess various strategies and practices.

Geological Assessment of the Watershed: A geological and hydrological assessment of the watershed was conducted by Dr. Michael R. Burkart, Dept of Geology, Iowa State University.

Project Name: Camp Creek Watershed
Project Sponsor: Polk County Conservation
Length of Project: January 1, 2009 to December 31, 2011

Counties included in the project area: Polk County

Total Watershed Improvement Funds awarded for this project:	**$ 246,920**
Total Watershed Improvement Funds spent:	**$ 1,859**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 245,061**

Project objectives:

- Build seven water and sediment control basins
- Reestablish native vegetation
- Construct and connect new tile lines to existing privately installed tiles lines in the Camp Creek Watershed
- Prepare for dredging and dredge Thomas Mitchell Pond (27,226 cubic yards of sediment)
- Re-stock the pond with native fish and other habitat
- Reduce the amount of sediment flowing into Thomas Mitchell Pond by 90% from 246.4 tons per year to 24.7 tons per year.
- Extend the like of Thomas Mitchell Pond for an estimated 100 years.

Summary of activities and accomplishments for calendar year 2009

Polk County Conservation Board personnel met with adjacent landowners to keep them informed of the project and sent a press release to neighboring landowners and park users informing them of the work that was to be undertaken at Thomas Mitchell Park.

PCCB staff cleared an existing 7 acre timber site to expedite survey work and subsequent design of sediment basins and corresponding tile line installation. Additionally, PCCB personnel sprayed a broadleaf herbicide in the summer of 2009 to facilitate survey work.

PCCB staff repaired the dam outflow structure, armored the banks downstream of the outflow structure, and installed a pool and riffle structure to assist in holding sedimentation as the pond drains. Draining of the Thomas Mitchell Pond commenced in August with fish relocation occurring in August and September. By year end, Thomas Mitchell Pond had been drained to 50% of capacity.

A woodland management plan was completed for the adjacent timber in this watershed. This plan identifies goals to improve the quality of timber while at the same time increasing the herbaceous layer and reducing sediment load.

During 2009, Polk County Conservation completed projects and activities necessary before actions funded under the Watershed Improvement Grant can be initiated. At year end, PCCB is poised to begin the implementation phase of the project when appropriate design plans for tile line installation and sediment basins are received from the Natural Resources Conservation Service (NRCS).

Project Name: City of Carpenter Sewage Treatment System Project
Project Sponsor: Mitchell County Soil & Water Conservation District
Length of Project November 1, 2006 to October 30, 2009

Counties included in the project area: Mitchell

Total Watershed Improvement Funds awarded for this project:	**$**500,000.00
Total Watershed Improvement Funds spent:	**$**500,000.00
Total Watershed Improvement Funds obligated:	**$** 0.00
Watershed Improvement Fund unobligated balance as of 10/30/2009:	**$** 0.00

Project objectives:

- Stop the illegal discharge of a point source of wastewater into Deer Creek
- Provide the residents of Carpenter with an environmentally sound system of treating wastewater
- Provide an affordable treatment of the wastewater for the residents and businesses located in Carpenter, Iowa
- Improve the water quality of the Cedar River and Deer Creek by eliminating a point source of water quality pollution

Summary of accomplishments and water quality outcomes

A two cell lagoon system for Carpenter was designed and constructed in accordance with section 14.4.6.2 of the Iowa Wastewater Facilities Design Standards.

The two cell system will operate as a controlled discharge system. Sewage water from the houses, businesses and community center will be transported to the lagoon for treatment. The lagoon water will be drawn down in the spring and fall during high runoff time periods to meet Iowa standards for fecal coli form levels in Deer Creek. Cell #1 has 120 days of effective detention time and cell #2 has 60 days of effective detention time.

The installed system meets the state requirements of:

- Carbonaceous Biochemical Oxygen Demand (CBOD) of 26 mg/liter
- Total Suspendable solids of 26 LBS/day
- Distance to drinking water wells increased from 50-100 ft. to 2000 ft

Practices completed were:

- 60 E-One Grinder pump stations installed for each business/residence/community building in Carpenter
- Two stage lagoon system installed according to IDNR/USDA-RD requirements
- 12,919 ft of low pressure sewer lines installed to convey the sewage to the lagoon site
- Erosion control measures installed to control erosion—rock rip rap, seeding of all disturbed area, gravel, erosion control fabric
- 1600 ft. of fence and gate was installed to protect the public from accidental injury

Project Name: Coldwater/Palmer Creek Watershed Incentive Program for Performance-based Environmental Management
Project Sponsor: Coldwater/Palmer Creek Watershed Improvement Association, Inc.
Length of Project: January 1, 2007 through December 31, 2009

Counties included in the project area: Butler County

Total Watershed Improvement Funds awarded for this project:	**$311,594**
Total Watershed Improvement Funds spent:	**$235,000**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 76,594**

Project objectives:

- Develop water quality awareness, knowledge, sustainable change and leadership within the watershed community.
- Connect farm management decision-making and environmental outcomes by demonstrating the use of science-based environmental indexes that integrate soil, crop and livestock management practices into progressively improving performance scores.
- Quantify the effectiveness of this approach, document lessons learned and develop critical success factors for the use of performance-based incentives in other watersheds.

Summary of accomplishments and water quality outcomes

Seventy-three percent of watershed farm operators participated. An end-of-project survey showed that 100% of respondents believe that nitrogen threatens water quality, compared to 60% in a 2006 baseline survey. With the Coldwater/Palmer watershed ranked in the 95th percentile for nitrate delivery in pre-project assessments of tributaries to the Cedar River, the watershed council focused their improvement efforts on reducing nitrate delivery by offering incentives for cornstalk nitrate testing (CNT) and nitrogen management alternatives and by encouraging testing of denitrifying bioreactors. Since the council organized in 2006, early season (April-June) nitrate-nitrogen (NO_3-N) concentration, as measured in monthly sampling at 4 sites, declined annually – 20 ppm NO_3-N (2006), 18 ppm (2007), 16 ppm (2008), 14 ppm (2009). Eighty-four percent of cooperators used the CNT to evaluate nitrogen management. Average results each year were below the 2006 baseline of 3,231 ppm NO_3-N – 2,041 ppm (2007), 2,137 ppm (2008), 1,117 ppm (2009). The optimal agronomic range is 700 – 2000 ppm NO_3-N. Three denitrifying bioreactors were installed and will continue to be monitored in partnership with the Iowa Corn Growers Association and Leopold Center.

The watershed council also provided performance incentives for Phosphorus Index (PI) and Soil Conditioning Index (SCI) improvement. Index values were calculated for 96% of cooperators. The watershed average PI on 327 fields covering 14,861 acres is 1.05, low environmental risk, while the SCI is 0.41, on a scale of -1 to 1.1. Cooperators used annual performance reports to target grassed waterways (17,125 feet), vegetative filters (6,220 feet) and tillage management; reducing annual sediment and phosphorus delivery by 1,294 tons and 1,681 pounds, respectively. Project cooperators appreciated the flexibility of the incentive program, the ability of the council to adjust the incentive program based on cooperator response and performance results; and the opportunity to be involved in watershed planning, goal setting and program evaluation. Any additional funding would be targeted to nitrogen management incentives to reduce nitrate delivery and increased incentives to encourage improving SCI values through tillage reduction.

Project Name: College Creek Watershed Improvement Project
Project Sponsor: City of Ames
Length of Project: January 1, 2008 to December 31, 2010

Counties included in the project area: Story County

Total Watershed Improvement Funds awarded for this project:	**$ 304,335.00**
Total Watershed Improvement Funds spent:	**$ 80,266.70**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 224,068.30**

Project objectives:

- Administer project and implement all activities and objectives in the project
- Integrate residents and recreational users with project technical staff in the process of design, planning, and construction of stream, riparian and upland water quality enhancement practices
- Engineer/design water quality enhancement practices; practices included are engineering-sound, biologically-friendly, and sensitive to the public's sense of aesthetics and interest in native plant communities
- Construct stream channel and stream bank stabilization and riparian enhancement
- Monitor and evaluate outcomes; changes in storm water runoff quantity and quality and stream bank stability will be measured

Summary of activities and accomplishments for calendar year 2009

A learning circle group interpreted results of a community survey to establish the long-term vision for this reach of College Creek. Aspects of the vision include proposed improvements to water quality, channel and bank stabilization, channel alignment, wildlife habitat, and stream area appearance. Participants were especially interested in reducing phosphorus concentrations, preserving existing trees, and future involvement in establishing riparian vegetation.

College Creek neighborhood residents volunteered to have stormwater BMPs in their yards and a total of 30 practices have been constructed. Both front and rear yard bioretention practices were included. Storm drain flow meter comparisons (pre- and post-construction), particularly in front yard applications, suggest immediate and measureable reductions in discharge reaching the storm drain system. Water quality sampling continued throughout the calendar year.

During the last quarter of 2009, the Drainage District immediately west of this project completed a three year discussion with the decision to replace a broken tile. This decision enabled the City to commence with design of the stream channel and bank stabilization measures as part of this project. Preliminary design plans (60 % complete) are being reviewed by City Engineering staff. The Department of The Army, Corps of Engineers (Rock Island District) issued a determination that work completed by this project will be covered under the Nationwide Permit No. 27. Bid for construction of the stream channel and bank stabilization as well as the riparian enhancement, including vegetative filters, is anticipated for spring 2010. This work includes channel restoration, including establishment of a two-stage channel, as well as bank stabilization with live staking.

Project Name: Competine Creek Water Quality Improvement Project
Project Sponsor: Marion Soil and Water Conservation District
Length of Project: July 1, 2009 to June 30, 2012

Counties included in the project area: Marion

Total Watershed Improvement Funds awarded for this project:	**$199,530**
Total Watershed Improvement Funds spent:	**$0**
Total Watershed Improvement Funds obligated:	**$44,020**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$155,510**

Project objectives:

- Administer the Competine Creek Water Quality Improvement Project to Ensure All Objectives and Activities Planned are Implemented
- Reduce Pollutant Delivery to Competine Creek by 1,787 Tons of Sediment and 2,144 pounds of Phosphorus per Year
- Install Urban Conservation Practices that Reduce the Volume of Peak Flow, Improve Stream Bank Stability, and Promote Infiltration of Stormwater Runoff
- Conduct an Information and Education Program to Increase Awareness and Knowledge of Competine Creek Water Quality Issues to Watershed Residents and the Local Community

Summary of activities and accomplishments for calendar year 2009

- Submitted annual progress report
- Received Sediment Delivery Calculator training
- Reported monthly progress to SWCD Commissioners
- Met with advisory committee quarterly
- Identified and ranked all potential sites meeting high priority land criteria
- Completed 20 field visits with landowners of highest ranking sites
- Surveyed, designed and developed cost estimates for 12 landowners
- Laid out 5 sites scheduled for construction
- Supervised construction of practices
- Identified and ranked potential urban sites based on highest environmental benefit
- Personally visited staff of local media outlets
- Submitted 2 news releases on project activities
- Provided one story lead article with local newspaper
- Identified education and stewardship program opportunities
- Developed education and stewardship program with local school
- Implemented education program using 2 classroom visits and 1 field day

Project Name: DMACC Lake Watershed Improvement Project
Project Sponsor: Polk Soil and Water Conservation District
Length of Project: May 1, 2009 to April 30, 2012

Counties included in the project area: Polk County

Total Watershed Improvement Funds awarded for this project:	**$500,000**
Total Watershed Improvement Funds spent:	**$355,835**
Total Watershed Improvement Funds obligated:	**$0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$144,170**

Project objectives:

- **Objective 1** Submit all administrative reports and budgets according to requirements
- **Objective 2** Develop final design of the DMACC Lake Watershed improvements of the WIRB project including: 1) creek stabilization, 2) surface restoration, 3) water quality improvements, 4) forebay, 5) Vortech unit, 6) native filter strip, and 7) educational signage.
- **Objective 3** Construct DMACC Lake Watershed improvements for the WIRB project consisting of 1) creek stabilization, 2) surface restoration, 3) water quality improvements, 4) forebay, 5) Vortech unit, 6) native filter strip, and 7 signage.

Summary of activities and accomplishments for calendar year 2009

The DMACC Lake Watershed Improvement Project has been very active since its start in May 2009. The first steps of the project included survey of the watershed and project areas. Once survey was completed, engineers began the design process for the creek stabilization, forebay, surface restoration, vortech unit, filter strip, and water quality improvements including the bioswale, and stormwater wetland. Phase I construction documents were completed in August 2009. Phase II construction documents were completed in December 2009.

The construction process began in August with clearing of undesirable species and bank shaping along the creek. DMACC staff and a large donation of equipment and labor were provided by Polk County to complete the initial creek stabilization bank shaping and forebay grading. Polk County and DMACC worked to clear undesirable species from the area, to shape banks and install culverts in September. Ajacks installation was completed by contractors in September. Rock rip rap was placed over the Ajacks. Final bank shaping by DMACC took place in November. RECP's (rolled erosion control products) were placed over temporary seeding along the channel. Additional seeding and mulching was planned, but halted due to early December's large snowstorm. It will continue once conditions are conducive.

Forebay construction began in September. Site grading to shape the basin was completed by Polk County and DMACC. In November the articulated concrete mats were installed by DMACC using a crane. A contractor began to construct the concrete outlet structure in September and completed the structure in November. It was determined that the lake elevation was too high to permit the forebay construction. During the entire duration of project construction the lake levels had to be pumped down to prevent flow backing up into the forebay. The stream channel also had to be pumped from the upper end of the forebay into the lake to bypass the construction of the basin and outlet structure.

Project Name: Dry Run Creek Sub-Watershed Improvement Project
Project Sponsor: Floyd County Soil & Water Conservation District
Length of Project: May 1, 2008 to January 31, 2010

Counties included in the project area: Floyd

Total Watershed Improvement Funds awarded for this project:	**$75,000.00**
Total Watershed Improvement Funds spent:	**$67,122.82**
Total Watershed Improvement Funds obligated:	**$ 0.00**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 7,877.18**

Project objectives:

- Administer the Dry Run Creek Sub-Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Construct alternative outlets for three ag drainage wells.
- Reduce nutrient delivery to surface water and aquifer through application of nutrient and pest management plans on 400 acres
- Conduct an information and education program to increase awareness and knowledge of Dry Run Creek Sub-Watershed

Summary of activities and accomplishments for calendar year 2009

Phase II of the Dry Run Creek Project was completed in 2009. Natural Resources Conservation Service staff assisted 5 operators in developing 431.6 acres of nutrient and pest management plans for their farms in the watershed. The plans meet NRCS and State requirements for nutrient and pest management.

A newsletter was sent to all Floyd County owners and operators (2100) which contained information on the accomplishments on the Dry Run Creek Sub-Watershed WIRB project.

All project requirements have been completed as of 12/31/2009.

Project Name: Duck Creek Buffer Program
Project Sponsor: River Action, Inc.
Length of Project: June 1, 2009 – June 30, 2011

Counties included in the project area: Scott County

Total Watershed Improvement Funds awarded for this project:	**$ 124,375.00**
Total Watershed Improvement Funds spent:	**$ 15,548.25**
Total Watershed Improvement Funds obligated:	**$ 41,616.02**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 67,210.73**

Project objectives:
Objective 1: Administer the Duck Creek Buffer Program to ensure all objectives and activities planned are implemented.

Objective 2: Construct 16 acres of buffer along Duck Creek's main stem and tributaries on public and private lands.

Objective 3: Address Duck Creek's impairment- E.coli bacteria, and improve physical and biological conditions of the stream.

Objective 4: Conduct an awareness and education campaign to increase awareness and provide education of Duck Creek's condition and the practices that degrade and improve the watershed and creek.

Summary of activities and accomplishments for calendar year 2009

- Discussions with the cities of Davenport and Bettendorf led to committed partnerships.
- A comprehensive collection of GIS data, budget data, and recommendations has been assembled to direct buffer site identification and implementation.
- Mailings about the project were disseminated to residents along Duck Creek and four educational workshops discussing watershed degradation and improvement were conducted.
- 8.5 acres of buffers are currently being put in the ground and 4 acres are in the planning stages.
- This project has received media exposure and was featured in a newspaper article in the Quad City Times on August 26, 2009.

Project Name: East Okoboji Beach
Project Sponsor: Dickinson SWCD
Length of Project: February 1, 2009 to January 31, 2012

Counties included in the project area: Dickinson

Total Watershed Improvement Funds awarded for this project:	**$386,000**
Total Watershed Improvement Funds spent:	**$205,500**
Total Watershed Improvement Funds obligated:	**$ 60,688**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$119,812**

Project objectives:

- Construct over 50 LID practices along a street reconstruction project
- Monitor water quality before, during, and after LID practice construction
- Conduct an information and education campaign that shows the value of LID

Summary of activities and accomplishments for calendar year 2009

Phase 1

The road construction portion of the project began in June 2009 and progressed well. In July, however, poor weather conditions hampered progress of the project. Water monitoring of the site was started prior to any construction activities to give a baseline of sampling data. The project was one month behind schedule by August due to rain and poor conditions. An extended fall construction season did allow the contractor to get project activities caught up by October 2009. All road construction has been completed along with preparation work for LID practices.

Phase 2

Clearing and grubbing has been completed and road culverts and tile have been emplaced to direct water into conservation practices. The conservation practices will be finished after shaping and moving of dirt has been completed. LID has to be the last construction of a site. All LID infrastructure is in place and all that is left is filling in the practices site with the LID soil mixture. The majority of expense left will be incurred during the summer of 2010 with the final construction of LID practices.

Water Monitoring

Water monitoring was started in late May prior to any construction so a before, during, and after construction snapshot of water samples could be taken of water quality in the construction site. The water samples contain high levels of Total Suspended Solids (TSS). A sample of water that is considered clean averages about 10 parts per million (ppm). The before construction samples averaged around 1,700 ppm or were 170 times more polluted than is considered clean. During construction samples averaged around 24,000 ppm or 2,400 times more pollution than would be considered clean. When compared to the control site, there was an average of 700 ppm particles, or 70 times what would be considered clean. In either instance a paved roadway contributes a significant amount of pollutants to the local water body, which is East Okoboji in this case.

Phase 3

Early spring 2010 to early summer 2010 will find the completion of the LID practices and a move to after construction water monitoring. Planting and seeding of the area and LID practices will occur from the summer of 2010 to summer of 2011. After construction water sampling will continue through the year 2011.

Project Name: Fox River Water Improvement Project
Project Sponsor: Fox River Ecosystem Development Board
Length of Project: January 1, 2007 to December 31, 2009

Counties included in the project area: Appanoose and Davis

Total Watershed Improvement Funds awarded for this project:	**$ 414,376.00**
Total Watershed Improvement Funds spent:	**$ 324,925.58**
Total Watershed Improvement Funds obligated:	**$ 32,735.21**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 56,715.21**

Project objectives for calendar year 2009:

- Administer the Fox River Ecosystem Improvement Project to ensure all objectives and activities planned are implemented.
- Administer technical and administrative activities on four sites for water quality monitoring with USGS.
- Install stream bank stabilization sites utilizing non-traditional bio-engineering techniques to reduce cost.
- Establish one site to enhance wildlife habitat.
- Construct 17 water and sediment control basins reducing livestock runoff and sediment to Fox River.
- Construct 17 grade stabilization structures providing livestock watering source and reducing sediment delivery from active gully erosion.
- Install 23,397/ft of fence to remove cattle from streams and ditches that enter the Fox River.

Summary of activities and accomplishments for calendar year 2009

- Project coordinator, Craig Foster, administered all projects to ensure all objectives and activities planed were implemented.
- Administered four sites for water quality monitoring and USGS has been doing sampling On the Fox River all year and was completed in December of 2009.
- One stream bank stabilization project has been completed.
- A 12 and 13 acre wildlife habitat seeding projects have been completed.
- 53 water and sediment control basins have been installed on priority sites.
- 7,561 ft of terraces to control and direct cropland runoff into grass filters has been completed.
- 10 grade stabilization structures have been completed by landowners on sites meeting the high priority land. All 10 sites provide watering source to livestock.
- 12,560 ft of fence was installed to keep cattle out of streams and ditches that enter the Fox River.

As calculated by using the sediment delivery calculator, this year projects have reduced 1,918 tons of sediment annually from entering the Fox River.
The heavy rain fall in this area has been a difficult challenge for contractors to build all these projects this year.

Project Name: Hurley Creek/McKinley Lake Watershed Improvement Project
Project Sponsor: City of Creston
Length of Project: March 1, 2008 to February 28, 2011

Counties included in the project area: Union County

Total Watershed Improvement Funds awarded for this project:	**$117,500.00**
Total Watershed Improvement Funds spent:	**$17,272.78**
Total Watershed Improvement Funds obligated:	**$44,755.00**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$55,472.22**

Project objectives:

#1. Administer the Hurley Creek/McKinley Lake Watershed Improvement Project and work with all stakeholders to ensure all project objectives are implemented as scheduled.

#2. Reduce by at least 50% the amount of annual erosion, which will help reduce sediment load, loss of property, and may improve water quality.

#3. Reduce E. coli levels to meet the designated use of McKinley Lake by controlling direct animal access, reducing animal waste runoff, and improving sanitary sewer systems.

#4. More effectively manage the storm water flow rate, which may reduce erosion and flooding and may improve water quality. Reduce stormwater flow into Hurley Creek by at least 35%.

#5. Educate the public, including civic groups, homeowners, farmers, and business owners in the Hurley Creek Watershed about Best Management Practices and establish comprehensive education and communications strategies to promote environmental awareness.

Summary of activities and accomplishments for calendar year 2009

Assisted landowners along the stream channel with installing 575 ft.(0.8Acres) of CRP Riparian Buffers along Hurley Creek. This will keep livestock excluded from the creek channel. Completed 150 ft. of stream bank stabilization and have contract for an additional 350 ft. in 2010. Installed one livestock crossing and will limit access to the stream channel. A total of 525 ft. of stream channel will be completely excluded with the help of the crossing. We have another landowner that has agreed to install a livestock crossing and buffer strips along the stream channel in 2010. This will help to further restrict livestock access to the channel.
The City continues to televise the sanitary sewer lines to identify sources of inflow and infiltration. In 2009 the City replaced or rehabilitated 9,520 ft. of sanitary sewer main in northeast Creston and a section north of Prairie Street but south of the reservoir dam. Worked with Iowa State University Extension office to promote rain gardens, also held tours of rain gardens. Worked with a local workshop to design, manufacture and selling rain barrels. Over 40 units have been sold locally. Sponsored our second annual community clean up of Hurley Creek and McKinley Lake.

Project Name: Keg Creek Watershed
Project Sponsor: Regional Water Association
Length of Project: January 1, 2008 to December 31, 2010

Counties included in the project area: Mills

Total Watershed Improvement Funds awarded for this project:	**$ 500,000**
Total Watershed Improvement Funds spent:	**$ 500,000**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 0**

Project objectives:

- **Objective 1 –** To administer the Keg Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- **Objective 2 –** Construct a community wide collection system to transport the sanitary sewage to a proposed wastewater treatment facility. Collection system will eliminate an estimated total of 74 septic systems and the associated pathogenic bacteria discharges to the watershed. During construction 10 additional septic tanks were discovered and removed.
- **Objective 3 –** Construct a municipal wastewater treatment facility to reduce pollutants in the Keg Creek Watershed, including 10,220 lb/year of BOD, 9,760 lb/year of suspended solids, and a large amount of bacteria, viruses, and other pathogenic organisms each year.
- **Objective 4 –** Conduct an information and education program to increase awareness and knowledge of Keg Creek water quality issues to the local community and County officials.

Summary of accomplishments and water quality outcomes

Previously, the community of Mineola had non-conforming, on-site septic tanks for waste treatment. The effluent from these systems drained into field tile. Only a few properties utilized drain-fields. Therefore, sewage discharge went directly into the Keg Creek watershed. Many lots were too small and would not have provided proper space separation distances between private wells and septic systems. This endangered the health, safety, and welfare of the well users as well as contaminating Keg Creek. As a result, a newly constructed wastewater collection and treatment facility is in place which eliminated approximately 83 on-site septic systems to provide a safer, cleaner waterbody. With the addition of the treatment system, the current previous high levels of bacteria and nutrients will decrease, resulting in a watershed that is not only more attractive to animal and plant life, but also provided safe drinking water and recreational opportunities to human users.

Project Name: Kettle Creek Urban Watershed Improvement Project
Project Sponsor: City of Ottumwa
Length of Project: March 16, 2009 to March 2, 2012

Counties included in the project area: Wapello

Total Watershed Improvement Funds awarded for this project:	$387,996
Total Watershed Improvement Funds spent:	$0
Total Watershed Improvement Funds obligated:	$0
Watershed Improvement Fund unobligated balance as of 12/31/2009:	$387,996

Project objectives:

1. Administer the Kettle Creek Urban Watershed Improvement Project to ensure all objectives and activities planned are implemented.
2. Construct bank protection in 6 areas (815 feet total) and 6 stream stabilization check dams within the urban portion of Kettle Creek.
3. Reduce urban sediment delivery to the outlet of Kettle Creek by 300 tons per year.
4. Conduct an information and education program to increase awareness and knowledge of Kettle Creek water quality issues to watershed residents, city park users, and the local community.

Summary of activities and accomplishments for calendar year 2009

2009 was the organizational, data collection, and project design period for the Kettle Creek Urban Watershed Improvement Project.

The City of Ottumwa and their engineering consultant, Veenstra & Kimm, Inc. investigated the project corridor to prioritize sites with eroding stream bed and banks. Topographic survey data was collected and analyzed and the project engineering features designed.

The City of Ottumwa and their environmental consultant, Griggs Environmental Strategies, LLC, prepared the plan of work and project schedule.

Project Name: Lake Macbride Watershed Shoreline Stabilization Project
Project Sponsor: Johnson Co Soil and Water Conservation District
Length of Project: June 1, 2008-June 30, 2009

Counties included in the project area: Johnson

Total Watershed Improvement Funds awarded for this project:	**$64,260**
Total Watershed Improvement Funds spent:	**$57,802**
Total Watershed Improvement Funds obligated:	**$ -0-**
Watershed Improvement Fund unspent funds:	**$ 6,458**

Project objectives:

- Stabilize 1400 feet of severely eroding shoreline adjacent to Lake Macbride along Cottage Reserve Road. This is one of the last remaining priority areas that were identified by the comprehensive watershed assessment.

Summary of accomplishments and water quality outcomes

The Lake Macbride Watershed Shoreline Stabilization Project was completed. The project costs came in under the project estimate and project bid resulting in unspent funds.

Vick Construction finished shoreline stabilization efforts. Johnson County Secondary Roads completed the seeding and final inspection. The Johnson County SWCD printed a feature story about the shoreline project in our district newsletter.

A post construction tour was organized and held by project sponsors. Fifteen people attended included two representatives from the Johnson County Board of Supervisors. Finally, all WIRB reports were completed including the progress, annual, and final reports.

Project Name: Lake Morris Water Quality Improvement Project
Project Sponsor: Lucas Soil and Water Conservation District
Length of Project: January 1, 2009 to December 31, 2011

Counties included in the project area: Lucas

Total Watershed Improvement Funds awarded for this project:	**$ 462,375.00**
Total Watershed Improvement Funds spent:	**$ 221,633.10**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 240,741.90**

Project objectives:

- Perform all administrative requirements as per grant agreement and approved application.
- Improve water quality for raw water intake at Chariton Water Department Intake. Goals are to reduce pH maximums from over 9.0 to 8.0 and turbidity monthly average from 2008 yearly average of 15 ntu (nephelometric turbidity units) to 10 ntu.
- Reduce sediment delivery to Lake Morris by 661 tons of sediment. This equates to reducing 75% of the assessed sediment loading directly from city owned property surround Lake Morris. Installation of three grade stabilization and 15 water and sediment control basins will achieve this goal.
- Conduct an information and education program to increase awareness and knowledge of Lake Morris water quality issues to city residents, lake users, and the local community.

Summary of activities and accomplishments for calendar year 2009

Lucas SWCD approved Kim Williams as project coordinator. New Project Manager and Sediment Delivery training was received. An Advisory Committee was formed and met in September. A Contribution Agreement is in effect between NRCS and SWCD to secure needed technical assistance for survey, design, layout, and inspection of structures proposed in the grant agreement during 2010 fiscal year.

Five SolarBees were installed 3/23/09. During September and December, turbidity levels averaged 8.9 ntu. Yearly average was 16 ntu., but BMP's have not begun and Lucas County received excessive rain during 2009. Only one month pH was above 9 at 9.1 in 2009 compared to three months being above 9 in 2008. Cyanobacteria algae blooms are associated with high pH. Overall it is reported through the Chariton Water Department that Lake Morris is clearer than it has ever been in years as a result of the SolarBees installation and water quality has become more consistent at the raw water intake.

No BMP's have begun, but are planned for 2010.

Chariton Newspapers reported in five different articles on the WIRB funding of SolarBees and aiding in the building of erosion control structures within City owned property and private property. Lucas SWCD annual newsletter article included a SolarBee picture, explained its use and purpose, and explained proposed structures on the Lake's city owned land and the private land.

Project Name: Leisure Lake Watershed
Project Sponsor: Limestone Buffs Resource Conservation and Development Area, Inc
Length of Project: January 1, 2007 – December 31, 2009

Counties included in the project area: Jackson

Total Watershed Improvement Funds awarded for this project:	**$ 500,000.00**
Total Watershed Improvement Funds spent:	**$ 108,247.24**
Total Watershed Improvement Funds obligated:	**$ 0.00**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 391,752.76**

Project objectives:

- Administer the Leisure Lake Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Secure necessary agreements, contracts, and administrative services to move project forward to construction.
- Construct a wastewater collection and treatment system for the un-incorporated community of Leisure Lake to reduce nutrient and bacteria impairments to Lytles Creek, the Maquoketa River, and local groundwater sources.

Summary of accomplishments and water quality outcomes for calendar year 2009

The Limestone Bluffs RC&D contracted with the Eastern Iowa Rural Utility Service System (EIRUSS) to plan and implement the wastewater treatment system for Leisure Lake. EIRUSS contracted IIW Engineering to complete the engineering plans for the project.

The primary activities during the year included gaining access to the proposed treatment site (access had previously been denied), working on the system design, and determining the number of users. The owners gave approval for access in late spring. The engineer then completed survey work and soil borings. Those activities were completed in the summer. That information was then used to work on more detailed design. The collection system design is near completion and was awaiting final lagoon design for submission and approval from the Iowa DNR.

The detailed IIW survey and design resulted in the access road being moved to the east side of the site and the basis for acquiring the land. Staff negotiated with the property owner on the east side for a road easement. Negotiations were completed in December with the easement to be signed in 2010. Appraisal work on the lagoon site began near the end of December.

EIRUSS worked with IIW and County staff to determine the exact number of users. The layout of Leisure Lake and nature of the residents (part-time vs full time) makes this challenging. That effort continues.

The EIRUSS Board approved a 28E Agreement with the Jackson County Board of Supervisors for operation of the system. The County Board has yet to take action on that agreement.

Project Name: Lime Creek Watershed Incentive Program for Performance-based Environmental Management
Project Sponsor: Lime Creek Watershed Improvement Association, Inc.
Length of Project: January 1, 2007 through December 31, 2009

Counties included in the project area: Buchanan County

Total Watershed Improvement Funds awarded for this project:	**$290,011**
Total Watershed Improvement Funds spent:	**$202,710**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 87,301**

Project objectives:

- Develop water quality awareness, knowledge, sustainable change and leadership within the watershed community.
- Connect farm management decision-making and environmental outcomes by demonstrating the use of science-based environmental indexes that integrate soil, crop and livestock management practices into progressively improving performance scores.
- Quantify the effectiveness of this approach, document lessons learned and develop critical success factors for the use of performance-based incentives in other watersheds.

Summary of accomplishments and water quality outcomes

Monitoring of 7 Cedar River tributaries shows that Lime Creek has had the steepest decline in nitrate-nitrogen (NO_3-N) concentration since 2000, with the majority of the decline since the watershed council organized in 2006. Prior to 2006, Lime Creek had the highest NO_3-N concentration of the 7 monitored tributaries 5 of 6 years. During 2008 and 2009, Lime Creek tested below 10 ppm NO_3-N, a 19% reduction compared to 2005.

Forty-five percent of residents participated with 23 cooperators completing Phosphorus Index (PI) and Soil Conditioning Index (SCI) calculations on 12,068 acres. The PI and SCI, along with the cornstalk nitrate test (CNT) are tools used by cooperators to evaluate conservation and nutrient management performance. The average PI, 0.88 (very low), and SCI, 0.56 (on a scale of -1 to 1.1), along with water monitoring data were used to set project priorities. Performance is high because 48% of participating farms use notill planting for at least one crop in their rotation. Project cooperators improved SCI scores 200% when notill planting soybeans on environmentally sensitive fields. During the course of the project, participants reduced sediment delivery to Lime Creek by 959 tons/year and phosphorus delivery by 1246 pounds/year through installing and improving waterways, planting vegetative filters and reducing tillage.

Seventy-five percent of cooperators enrolled in the CNT program. Jesup FFA members collected samples, estimated yield and reported results to cooperators. Annual CNT results and corn yields were variable but the process allowed cooperators to evaluate their nitrogen applications for the first time. A denitrifying bioreactor demonstration installed in November 2006 was monitored regularly. Initial 2007 results were promising with 90% NO_3-N removal; however, drainage problems affected bioreactor efficiency in subsequent years. Monitoring will continue in 2010. Future performance and practice incentives may need to be higher to gain operator interest in this long, narrow watershed having a significant amount of rented land. Further identification of land operators living outside the watershed may increase participation.

Project name: Ludlow Creek Watershed Project
Project Sponsor: Allamakee County Soil and Water Conservation District
Length of Project: January 1, 2009 - December 31, 2011

Counties included in the project area: Allamakee, Winneshiek.

Total Watershed Improvement Funds awarded for this project:	**$ 496,300**
Total Watershed Improvement Funds spent:	**$ 69,167**
Total Watershed Improvement Funds obligated:	**$ 116,781**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 310,352**

Project objectives:

- Reduce sediment loading of Ludlow Creek by 40%.
- Reduce animal waste run-off by 40%.
- Address the water quality impact that sinkholes have on the watershed.

Summary of activities and accomplishments for calendar year 2009

In 2009, the Allamakee County SWCD began water quality improvement efforts in the Ludlow Creek watershed. A total of $143,000 in WIRB funding, $128,000 in federal EQIP funding, and $51,248 landowner dollars are currently obligated or have been spent thus far for best management practices (BMPs) in the watershed. The BMPs that have been implemented will prevent an estimated 664 tons of soil, 863 lbs. of phosphorus (P), and 1,328 lbs. of Nitrogen (N) from reaching Ludlow Creek annually.

The 2009 summer had cooler than normal growing conditions, which led to a delayed crop harvest and a shorter available fall BMP construction season. A total of 24,000 feet of terraces and five grade stabilization structures were planned for construction in the fall, but due to the shortened construction season just 9,125 feet of terraces and one grade stabilization structure were completed. These structures will stop a projected annual loading of 305 tons of soil, 397 lbs. P, and 610 lbs. N into Ludlow Creek. The remaining 14,875 feet of terraces and four grade stabilization structures are scheduled for construction in 2010.

Also in 2009, the project addressed the water quality impact of sinkholes and karst topography by promoting grass filter-strip implementation. A total of 58 acres of grass filter-strips have been planted around sinkholes and along Ludlow Creek. These grass filter-strips are contracted to be established for at least five years and will filter out an estimated 359 tons of soil, 467 lbs. P, and 718 lbs. N every year.

Landowner outreach was a big part of the project's water quality efforts in 2009. An introduction letter and questionnaire were sent to 83 landowners/operators at the start of the year. These mailings led to 20 on-farm landowner contacts and 13 BMP cost-share contracts. An e-newsletter was also started and currently 14 landowners are on the project email list to receive conservation news and updates. The end of the year was wrapped up with a local newspaper press release and a landowner/operator newsletter that gave folks a look ahead to 2010.

Project Name: Miners Creek Watershed Improvement Project
Project Sponsor: City of Guttenberg
Length of Project: May 1, 2008 to April 30, 2011

Counties included in the project area: Clayton

Total Watershed Improvement Funds awarded for this project:	**$ 500,000**
Total Watershed Improvement Funds spent:	**$ 385,762**
Total Watershed Improvement Funds obligated:	**$ 21,280**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 92,958**

Project objectives:

- Eliminate the sewage and stormwater runoff from the City of Guttenberg into Miners Creek
- Develop, enhance and preserve 13 acres of wetlands in the Miners Creek riparian zone
- Reduce direct livestock access to Miners Creek by 33%
- Reduce erosion and sediment loading by 25% to Miners Creek using bank stabilization and upland treatment practices

Summary of activities and accomplishments for calendar year 2009

The large-scale sewage outfall redirection and improvement project in the City of Guttenberg has been completed. The two-phase project has eliminated sewage and stormwater runoff from the City of Guttenberg from entering into Miners Creek and negatively impacting water quality in the stream. The sewage outfall and urban stormwater runoff in this small watershed had been previously identified as potential sources of water quality impairments in Miners Creek. Eliminating these sources of impairments will have a positive impact on stream conditions, water quality and aquatic life conditions in Miners Creek. This project also provides an excellent example of ways to effectively reduce urban contributions to water quality impairments.

The City of Guttenberg also completed work to develop and enhance 13 acres of wetlands in the Miners Creek riparian zone. This work resulted in the creation of 3 acres of wetland, the enhancement of and additional 2 acres and the preservation of 9 acres of wetlands along the lower portion of Miners Creek which will improve water quality by filtering chemical and biological contaminants from urban runoff prior to reaching the stream. The wetland complex also allows native vegetation to uptake nutrients from the water to reduce the delivery of nitrogen and phosphorus from Miners Creek to the Mississippi River that ultimately contribute to the Zone of Hypoxia in the Gulf of Mexico. As an added benefit, wetlands help to restore the natural hydrology of watersheds and increase water holding times that can significantly reduce damage caused by flooding.

Preliminary visits and designs were created for streambank stabilization projects on 3 sites along Miners Creek and several landowners have applied for EQIP funding assistance to incorporate grazing management systems along the Miners Creek Corridor. Water monitoring of Miners Creek was also conducted during the past year to continue to assess stream conditions.

Project Name: Muchakinock Creek Watershed
Project Sponsor: Mahaska Soil and Water Conservation District
Length of Project: February 1, 2009 to January 31, 2012

Counties included in the project area: Mahaska

Total Watershed Improvement Funds awarded for this project:	**$ 500,000.00**
Total Watershed Improvement Funds spent:	**$ 155,847.50**
Total Watershed Improvement Funds obligated:	**$ 167,000.00**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 333,000.00**

Project objectives:

- Abandon Mine Reclamation
  - Earthmoving
  - Grading
  - Soil and Water Conservation Practice Construction
  - Soil Amendments
  - Seeding

Summary of activities and accomplishments for calendar year 2009

- 87,443 cu. yds of earth moving. 100% of goal
- 78 tons of erosion stone installed. 100% of goal
- Sub-grade mulch and ag-lime placed. 100% of goal

Project Name: Norfolk Creek Subwatershed Improvement Project
Project Sponsor: Allamakee County Soil and Water Conservation District
Length of Project: January 1, 2007 to December 31, 2009

Counties included in the project area: Allamakee

Total Watershed Improvement Funds awarded for this project:	**$ 351,150**
Total Watershed Improvement Funds spent:	**$ 244,594**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 106,556**

Project objectives:

- Construct three grade stabilization structures that would trap sediment from approximately 300 acres. Construct 20,000 feet of terraces impacting approximately 100 acres in high priority areas. Construct 4 sediment control basins that would trap sediment from approximately 200 acres
- Reduce pollutant delivery to Norfolk Creek by approximately 3,300 tons of sediment per year
- Conduct an information and education program to increase awareness and knowledge of Norfolk Creek water quality issues to watershed residents and the local community
- Conduct water quality sampling and record all data for comparison with sampling data collected since 2003

Summary of activities and accomplishments for calendar year 2009

All potential sites had the necessary GIS data generated such as soils maps, topog maps, distance to stream, distance to sinkholes, etc. One grade stabilization structure has been installed by a landowner on a site meeting the criteria. This site reduced sediment delivery by an estimated 247 t/y. Four sediment control basin have been installed by landowners on sites meeting the criteria. These sites reduced sediment delivery by an estimated 183 t/y. A total of 3,775' of terraces were constructed reducing sediment by a total of 86 t/y. The above practices treated approximately 110 acres.

A news article appeared in the Waukon Standard newspaper and in the Allamakee County Soil and Water Conservation District annual report covering WIRB opportunities and accomplishments. The District's newsletter also had coverage of the Norfolk WIRB project. A brochure detailing the accomplishments during the three years of this WIRB project will be sent out to all landowners within Norfolk subwatershed in January 2010. Monthly reports were presented to commissioners at each meeting of the Allamakee SWCD. Quarterly reports were submitted to the WIRB at the appropriate times. Final Report will be submitted by the January 15, 2010 deadline.

Water quality sampling was discontinued in October of 2008, due to budget cuts, but there is monthly data dating back to May of 2004. Brown trout have been stocked in Norfolk Creek since the early 70's. Norfolk Creek received 2,000 fingerling brown trout in 2009. A stream survey indicated that the stocked fish were healthy and using the available habitat well.

North Fork Maquoketa River Headwaters Watershed Project
Project Sponsor: Coffee Creek Watershed Improvement Association, Inc.
Length of Project: July 1, 2008 through June 30, 2011

Counties included in the project area: Dubuque and Delaware Counties

Total Watershed Improvement Funds awarded for this project:	**$406,138**
Total Watershed Improvement Funds spent:	**$171,818**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$234,320**

Project Objectives:

- Involve 60% of watershed farm operators in a performance-based incentive program.
- Improve Phosphorus Index and Soil Conditioning Index levels by 15%, reduce cornstalk nitrate test results by 40% and reduce sediment delivery by 7,500 tons per year.
- Reduce nutrient delivery from livestock feedlots within the watershed.
- Provide critical, decision-making information to watershed residents and document the effectiveness of a performance-based approach to benefit the implementation of performance-based incentives in other watersheds.

Summary of accomplishments and water quality outcomes

Project enrollment increased to 35 cooperators or 41% of potential participants, exceeding the year 1 goal of 33%. Thirty-one cooperators completed performance index calculations for 325 fields covering 8,428 acres. The average Phosphorus Index (PI) is 2.49 (producing some water quality impairment) and the Soil Conditioning Index is 0.50 on a scale of -1 to 1.1. Project cooperators use these performance measurements to identify priority fields where management changes would provide the most environmental benefit. Seventy-two percent of cooperators made changes that improved their farm-level environmental performance, improving both PI and SCI by 10%. To achieve performance improvement producers have installed or improved 19.8 miles of grassed waterways, converted to no-till and contour planting, planted cover crops and reduced tillage. Seventy-seven percent of participants have installed or improved grassed waterways. To date, project incentives for waterways are $21,635 or $0.21 per linear foot. Cooperators have reported waterway investments of $0.69 per linear foot.

Twenty-six participants were active in the cornstalk nitrate testing (CNT) program. Average CNT results from 91 samples were 1,629 ppm NO_3-N. The optimal range is 700 – 2000 ppm. Cooperators involved in their third year of a watershed stalk testing program had results 14% lower than cooperators involved 1 or 2 years; 1,488 ppm versus 1,726 ppm, respectively.

Fourteen cooperators completed farmstead assessments using Farm-A-Syst materials. The assessment process allows producers to evaluate the environmental performance their operation.

This was the fourth year of intensive water monitoring of the North Fork Headwaters. Twelve water sampling events occurred in 2009; five non-rain events and seven following rain events. Results for all parameters continue to be significantly influenced by rainfall events. As part of the monitoring plan, macroinvertebrate sampling is completed twice each year. The family biotic index, a measure of the number and pollution tolerance of the macroinvertebrate families present, was less than 5 (4.57) or good, on a scale of 0-10 with lower being desirable, for the first time. Previous levels have been 2006 – 5.83 (fairly poor), 2007 – 5.11 and 2008 – 5.16 (fair).

Project Name: Price Creek Water Quality and Erosion Control Project
Project Sponsors: Iowa and Benton County Soil and Water Conservation Districts
Length of Project: January 1, 2007 – December 31, 2009

Counties included in the project area: Iowa and Benton
Total Watershed Improvement Funds awarded for this project: $71,075.00
Total Watershed Improvement Funds spent: $33,644.54
Total Watershed Improvement Funds obligated: $20,214.00
Watershed Improvement Fund unobligated balance as of 12/31/2009: $17,216.46

CY 2009 Project Objectives:

- Construct 2 grade stabilization structures, 19 acres of grassed waterways and 9 water/sediment control basins, 2,500 feet of terraces on drainage areas containing high priority erodible land.
- Reduce sediment delivery of 650 acres of high priority erodible land in the Price Creek Watershed.
- Conduct an information and education program to increase awareness and knowledge of the Price Creek water quality issues to watershed residents and the local community.

Summary of activities and accomplishments for calendar year 2009

2009 was another year of extreme rainfall events in the Price Creek Watershed, finishing over 14 inches above normal. The resulting late harvest presented challenges to farmers and their contractors, still backlogged with projects related to 2008 damages. Despite the challenging season, progress was made towards the 2009 Plan of Work objectives and the overall project objectives. With the WIRB contract expiring there were five projects remaining and scheduled for fall construction. Three of the five are nearly completed and two were not started.

In terms of the updated objectives outlined in amendment 2, the project has completed:

- 4 of 3 grade stabilization structures (met both original and CY09 project Objectives)
- 35.1 of 25.6 acres of grassed waterways (22.1 more than original & 1.9 less than CY09)
- 26 of 4 water/sediment control basins (16 more than original & 10 more than CY09)
- 2,175 of 1600 feet of terraces (175 more than original & 625 less than CY09)
- 1,314 of 1,500 acres of high priority land received sediment delivery reductions (200 less than CY09 POW).
- Information and educational activities in CY09 included 1 septic and well public meeting and 1 nutrient management producer meeting. Articles appeared in local papers for each. In addition, an IOWATER volunteer snapshot event was conducted in May.

Additional conservation projects were completed with IDALS-DSC's WSPF program and the USDA-NRCSs' EQIP and EWP programs. They included an Ag. waste facility, 290 ft. of stream bank stabilization and 1 grade stabilization project.

In 2009 the Benton and Iowa SWCD's received an extension to their WPF/WSPF and IDNR-EPA 319 Price Creek agreements provided that an EPA approved Watershed Management Plan is completed. Focused on the bacteria impairment on the Iowa River, the WMP is to be completed in 2010. As the districts work toward completing the WMP, they will encourage producers to apply for the existing State Cost-Share (IFIP) and NRCS EQIP programs and look for future opportunities to partner with the WIRB.

Project Name: Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2006
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: January 1, 2007 to December 31, 2009

Counties included in the project area: Clarke, Decatur, Lucas, and Wayne

Total Watershed Improvement Funds awarded for this project:	**$497,100.00**
Total Watershed Improvement Funds spent:	**$415,266.57**
Total Watershed Improvement Funds obligated:	**$ 17,662.10**
Watershed Improvement Funds unobligated balance as of 12/31/2009:	**$ 64,171.33**

Project objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 3,300 tons and 13,300 pounds respectively
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land
- Perform all administrative requirements as per grant agreement and approved application

Summary of activities and accomplishments for calendar year 2009

Rathbun Land and Water Alliance members and partners developed and used geographic information system analysis and field evaluations to identify 2,700 acres of priority land owned and/or farmed by 56 landowners in the targeted sub-watersheds of Lower Chariton Creek and Chariton River #3. The Alliance worked with these landowners to help them evaluate the need for, and benefits of, applying practices for this priority land. As a result, the Alliance assisted 34 landowners plan and apply best management practices for close to 1,500 acres, approximately 750 acres of which were priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 2,400 tons and 11,400 pounds per year respectively. Practices most commonly applied by landowners for priority land included terraces, grade stabilization structures, and water and sediment control basins.

The Alliance's outreach efforts focused on one-on-one contacts by project staff with landowners who own and/or farm priority land in the targeted sub-watersheds. Outreach activities also included: Alliance's 2009 annual meeting, during which five landowners were recognized as "Rathbun Lake Protectors" for their efforts to apply practices in the watershed; Alliance's 2009 annual report; exhibits at the Iowa Water Conference, REAP Day at the Iowa Capitol, and on the RAGBRAI route in the watershed; installed and maintained "Protect Rathbun Lake" and "Rathbun Lake Protector" signs; secured media coverage for project activities; and maintained the Alliance's Internet site. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners continued to work with the project's team of experts to plan, carry out, and assess activities. The Alliance's board of directors and team members regularly reviewed progress in project implementation. The Alliance submitted the required project plans of work, progress reports, and financial ledgers.

Project Name: Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2007
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: January 1, 2008 to December 31, 2010

Counties included in the project area: Clarke, Lucas, and Wayne

Total Watershed Improvement Funds awarded for this project:	**$495,720.00**
Total Watershed Improvement Funds spent:	**$232,051.44**
Total Watershed Improvement Funds obligated:	**$ 72,997.93**
Watershed Improvement Funds unobligated balance as of 12/31/2009:	**$190,670.63**

Project objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 8,130 tons and 35,980 pounds respectively
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land
- Perform all administrative requirements as per grant agreement and approved application

Summary of activities and accomplishments for calendar year 2009

Rathbun Land and Water Alliance members and partners used geographic information system analysis and field evaluations to identify 5,100 acres of priority land that is owned and/or farmed by 65 landowners in Upper and Lower Dick Creek and Chariton River #4 and #8 targeted sub-watersheds. The Alliance assisted 40 of these landowners to plan and apply best management practices for close to 1,100 acres, approximately 550 acres of which is priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 1,700 tons and 9,000 pounds per year respectively. Practices planned and applied by landowners include terraces, grade stabilization structures, and water and sediment control basins. The Alliance continued to contact landowners in the targeted sub-watersheds to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts focused on one-on-one contacts by project staff with landowners who own and/or farm priority land in the targeted sub-watersheds. Outreach activities also included: Alliance's 2009 annual meeting, during which five landowners were recognized as "Rathbun Lake Protectors" for their efforts to apply practices in the watershed; Alliance's 2009 annual report; exhibits at the Iowa Water Conference, REAP Day at the Iowa Capitol, and on the RAGBRAI route in the watershed; installed and maintained "Protect Rathbun Lake" and "Rathbun Lake Protector" signs; secured media coverage for project activities; and maintained the Alliance's Internet site. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners continued to work with the project's team of experts to plan, carry out, and assess activities. The Alliance's board of directors and team members regularly reviewed progress in project implementation. The Alliance submitted the required project progress reports and financial ledgers.

Project Name: Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2008
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: February 1, 2009 to January 31, 2012

Counties included in the project area: Decatur and Wayne

Total Watershed Improvement Funds awarded for this project:	**$245,279.00**
Total Watershed Improvement Funds spent:	**$ 8,468.76**
Total Watershed Improvement Funds obligated:	**$ 64,189.50**
Watershed Improvement Funds unobligated balance as of 12/31/2009:	**$172,620.74**

Project objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 2,160 tons and 8,210 pounds respectively
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land
- Perform all administrative requirements as per grant agreement and approved application

Summary of activities and accomplishments for calendar year 2009

Rathbun Land and Water Alliance members and partners used geographic information system analysis and field evaluations to identify 1,300 acres of priority land that is owned and/or farmed by 16 landowners in the Chariton River #2 targeted sub-watershed. The Alliance has assisted four of these landowners to plan and apply best management practices for close to 270 acres, approximately 130 acres of which is priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 300 tons and 1,000 pounds per year respectively. Practices commonly planned and applied by landowners include terraces, grade stabilization structures, and water and sediment control basins. The Alliance continued to contact landowners in the targeted sub-watershed to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts focused on one-on-one contacts by project staff with landowners who own and/or farm priority land in the targeted sub-watershed. Outreach activities also included: Alliance's 2009 annual meeting, during which five landowners were recognized as "Rathbun Lake Protectors" for their efforts to apply practices in the watershed; Alliance's 2009 annual report; exhibits at the Iowa Water Conference, REAP Day at the Iowa Capitol, and on the RAGBRAI route in the watershed; installed and maintained "Protect Rathbun Lake" and "Rathbun Lake Protector" signs; secured media coverage for project activities; and maintained the Alliance's Internet site. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners assembled and worked with a team of experts to plan, carry out, and assess project activities. The Alliance's board of directors and team members regularly reviewed progress in project implementation. The Alliance submitted the required project plan of work, progress reports, and financial ledgers.

Project Name: Remsen Source Water Protection Project
Project Sponsor: City of Remsen
Length of Project: April 8, 2009 to April 7, 2012

Counties included in the project area: Plymouth

Total Watershed Improvement Funds awarded for this project:	**$ 160,800**
Total Watershed Improvement Funds spent:	**$ 160,800**
Total Watershed Improvement Funds obligated:	**$ 0**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 0**

Project objectives:

- Lower nitrate levels in raw water being pumped to our water plant

Summary of activities and accomplishments for calendar year 2009

- Acquired property bordering current well field
- Prepared crop ground for seeding into native wild grasses
- Planted native grasses in approximately 70 acres
- Two mowings of weeds/grass
- Saw some establishments of native grasses and wild flowers
- Old homestead site cleanup
  a) Grove clean-up = 60%
  b) Old building removal = 90%
- Monitoring raw water, per well, on a monthly basis, seeing the nitrate levels slowly dropping from initial sampling data

Project Name: Sand Creek Watershed Project
Project Sponsor: Delaware Soil and Water Conservation District
Length of Project: January 1, 2008 to December 31, 2010

Counties included in the project area: Delaware

Total Watershed Improvement Funds awarded for this project:	**$ 387,787**
Total Watershed Improvement Funds spent:	**$ 148,422**
Total Watershed Improvement Funds obligated:	**$ 75,736**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 163,629**

Project objectives:

- To improve the fisheries aspect of Sand Creek so that it can better serve as a nursery stream for the Maquoketa River, thus improving local recreational opportunities
- To apply streambank protection to 40% of critical areas on Sand Creek (3200' est.)
- To apply grassed waterways, no-till planting, terraces, sediment control basins, and improved nutrient management in the watershed to reduce delivery of sediment and nitrogen by 40%, as well as phosphorous and bacteria, to the stream.

Summary of activities and accomplishments for calendar year 2009

Streambank protection has been installed by three landowners on the priority stretch of lower Sand Creek since January 1. This 1655' of construction has repaired and protected 12 severely eroded sites, reducing sediment delivery to the stream by **507 tons annually**, as calculated by the Sediment Delivery Calculator, while also adding game-fish habitat to the stream. An additional five landowners have been approved for streambank protection on 8 sites, many of these already surveyed for potential application over this winter, with another 2 applications pending, one of them for a very large site. DNR Fisheries has visited most of these sites, and has been encouraged by the cobble stream bottom and deep pools that have been observed. One short reach of the priority portion of Sand Creek has yet to be inventoried.

Waterway planning and construction has again kept the coordinator very busy through this summer and fall. Six landowners have repaired, or will repair waterways to remedy ditches and severe erosion adjacent to them, using State I-jobs funds to provide 75% cost-share with no cost to the project. Several landowners also had other waterways to repair just out of the watershed. CRP waterways, totaling 9595', were installed by 4 landowners, with projected annual sediment savings of **312 tons**. Two other landowners have CRP applications that have yet to be finalized. 8 landowners have used Project funds to build or repair 12,180' of waterways, yielding **873 tons of soil savings.** Two Project waterways have been started but not certified for payment yet.

No new no-till was initiated with Project funds during this past year. A well-attended and well-received meeting featuring 5 successful long-time no-tillers was held at the Fairgrounds in February, but a wet spring planting season, followed by an unusually late and wet fall harvest season, has caused producers to stick with their familiar tillage systems. The Project has also sent out a first-time no-tiller how-to newsletter to watershed producers and other attendees of the afore-mentioned meeting, held a soil quality demonstration at neighbors that tilled vs. no-tilled, and placed a series of articles promoting no-till in the local newspaper. One producer has been approved for grid sampling for nutrient management, and another has applied for the practice.

Project Name: Sands Timber Watershed Project
Project Sponsor: Taylor SWCD
Length of Project: July 1, 2009 to June 30, 2012

Counties included in the project area: Taylor

Total Watershed Improvement Funds awarded for this project:	**$ 499,751.00**
Total Watershed Improvement Funds spent:	**$ 49,927.17**
Total Watershed Improvement Funds obligated:	**$ 115.961.67**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 333,862.16**

Project objectives:

- To reduce the amount of sediment reaching Sands Timber Lake by 974 tons through the construction and implementation of soil and water conservation practices.

Summary of activities and accomplishments for calendar year 2009

This fall marked the beginning of much needed conservation practice implementation in the Sands Timber Watershed. In September much work was done on park land. A bid was accepted from Sickel's Construction of Mt. Ayr for the construction of three silt ponds. By October the structures were complete. These three structures alone prevent 824 tons of silt from reaching Sands Timber Lake each year. The public is already commenting on how much cleaner the water looks. Secchi disc measurements are already at an all time high.

Much interest has also been expressed on private land. One basin was completed in October. Money was obligated for eight terrace projects and several ponds. Mother Nature however provided relentless rains, halting project progress. Most project sites did not have corn harvested before December. Hopefully this spring will bring favorable construction conditions so that our project can really get a good start. Much work is yet to be done in the watershed. Landowner interest is high, which opens the door for a successful project if only Mother Nature would cooperate.

Due to the poor fall and backlog of terrace projects the SWCD is not asking for additional practice funds in the next funding request. We believe that if we can finish our already obligated projects and possibly a few more we will feel blessed.

Project Name: Saylor Creek Sub-Watershed Improvement Project
Project Sponsor: City of Ankeny
Length of Project: October 1, 2008 to September 30, 2010

Counties included in the project area: Polk

Total Watershed Improvement Funds awarded for this project:	**$ 475,800**
Total Watershed Improvement Funds spent:	**$_____**
Total Watershed Improvement Funds obligated:	**$ 310,520**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 165,280**

Project objectives:

- Administer the Saylor Creek Subwatershed Improvement Project Phase 2 to ensure all objectives and activities planned are implemented.
- Restore and protect the stream channel using a variety of practices including 900 lineal feet of creek toe armoring, 40,000 cubic yards of slope grading, 1,600 square yards of geotextile matting, 6 riffle/pool structures, 1 constructed wetland, and revegetation with 5 acres of native seeding, 3 acres of lawn seeding and 84 flats of prairie plantings/plugs.
- Develop an educational program featuring educational signage along a multipurpose trail to increase awareness and knowledge of Saylor Creek Subwatershed water quality issues to watershed residents, trail users, and the local community.

Summary of activities and accomplishments for calendar year 2009

The project was designed and construction documents prepared. A bid opening was held on July 14, 2009. A public hearing was held on July 20, 2009. The project was awarded to Corell Contractor, Inc. and a contract in the amount of $1,143,268.20 was approved.

Construction on the project began in September, 2009 and is currently 90 percent complete. The contractor started work with clearing and grubbing. Work then began on the stream channel restoration and stabilization. The contractor started on the upstream end of the project and worked in sections that could be completed and reseeded within 21 calendar days. The water flow in the creek was diverted around the areas being disturbed to minimize soil erosion during construction.

The project consists of the installation of a series of riffle dams to provide grade changes in the stream channel and be able to create flatter channel slopes to reduce velocities. The water pools behind the riffle dams to allow sediment to settle out of the stream flow, and mimic natural stream processes in stable streams.

The toe of the creek channel, primarily at the outside bends of the meanders, is being armored with a product called A-Jacks, that provide a strong, interlocking base to support the sideslopes above it. The sides of the channel were then graded back to a stable slope through earthwork or with rock-filled filter socks and boulder retaining walls in tighter areas.

Project Name: Silver Lake Watershed Project
Project Sponsor: Osceola Soil and Water Conservation District
Length of Project: January 1, 2009 to December 31, 2011

Counties included in the project area: Dickinson and Osceola

Total Watershed Improvement Funds awarded for this project:	**$ 474,540.00**
Total Watershed Improvement Funds spent:	**$ 44,407.46**
Total Watershed Improvement Funds obligated:	**$ 0.00**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 430,132.54**

Project objectives:

- Conduct an information and education program tailored toward landowners and residents of the Silver Lake Watershed which would increase awareness of water quality issues facing Silver Lake, and what can be done to resolve them.
- Offer landowners and producers of the Silver Lake Watershed incentives for wetland restoration through the Wetland Reserve Program (WRP). Work with landowners and local NRCS staff to facilitate any potential projects towards acceptance and restoration.
- Ultimately restore 250 acres of wetland basin, with an associated 900 acres of upland buffer through WRP.
- Significantly reduce sediment and nutrient loading to Silver Lake.

Summary of activities and accomplishments for calendar year 2009

The Silver Lake Watershed Project and coordinator Ryan Ransom were off and running in January of 2009. Using grant funding from the State of Iowa Watershed Improvement Review Board (WIRB), landowners in the Silver Lake Watershed have been offered incentives for enrolling wetland acres into the Wetland Reserve Program (WRP). The WRP program is designed to compensate landowners for long-term wetland restoration efforts, and has a 30-year or a permanent easement option.

With the help of NRCS staff from Dickinson & Osceola County field offices, Ransom was able to submit several applications for new WRP projects covering over 200 acres of the watershed. Although available funding for new projects in 2009 has been very limited, staff is optimistic about a pair of key sites in the watershed which may rank high enough to be funded in spring of 2010. If restored, these wetland basins would be a great step forward in protecting the quality of water entering Silver Lake.

Between the months of May and August in the summer of 2009, water monitoring was conducted every two weeks at 7 key points in the watershed. Field data was recorded at each site, and samples collected at each site were sent to the University of Iowa Hygienic Laboratory in Iowa City. Periods of consistent rainfall in the months of June and July resulted in high levels of suspended solids and nutrient loading in many samples within the watershed, as well as isolated samples producing high bacteria counts. Data from the 2009 field season will be compared to sampling results from the same sites in previous years, and used to help paint a better picture of the water quality impairments facing Silver Lake.

Project Name: Staff and Beaver Creek Watersheds
Project Sponsor: Howard Soil and Water Conservation District
Length of Project: July 1, 2009 to June 30, 2012

Counties included in the project area: Howard

Total Watershed Improvement Funds awarded for this project:	**$**392,950
Total Watershed Improvement Funds spent:	**$** 37,304
Total Watershed Improvement Funds obligated:	**$** 5,588
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$**263,466

Project objectives:

Objective 1. Administer the Staff & Beaver Watershed Improvement Project to ensure all objectives and planned activities are implemented.

Objective 2. Construct waste storage facilities, terraces, waterways and wetland creations and implement other conservation practices to reduce nutrient loading to the Staff and Beaver Creeks.

Objective 3. Monitor sediment delivery and nitrate loading to Staff and Beaver Creeks.

Objective 4. Conduct an information and education program to increase awareness and knowledge of Staff and Beaver Creeks' water quality issues to watershed residents and the local community.

Summary of activities and accomplishments for calendar year 2009

July 1, 2009 marked the beginning of the WIRB phase of the Staff and Beaver Watershed Project. We have leveraged cost share dollars from WIRB, EQIP, CRP, WSPF and 319 to complete several practices in the watersheds:

1.) Terraces – 8,860' constructed (319)
2.) Waste Storage Facility – 1 certified complete (EQIP & WIRB)
3.) Grade Stabilization – 1 constructed (EQIP)
4.) Waterways – 3.6 ac. constructed (WSPF & 319)
5.) Wetland Creations – 1 constructed (319)
6.) CNMP (Certified Nutrient Management Plans) – 3 written (EQIP)

Several other practices are approved and are in the process of being constructed including:

1.) Terraces - 1,675 (EQIP & 319)
2.) Waste Storage Facility – 1 (WSPF, EQIP & WIRB)
3.) Waterways – 7 ac. (319 & CRP)
4.) Wetland Creations – 2 (319)
5.) Timber Stand Improvement - 11.2 ac. (EQIP)
6.) Buffer – 4 ac. (CRP)

We have calculated a sediment delivery reduction of 471 tons per year for the practices completed since July 1, 2009. We have 4 new applications for the next EQIP signup which include 2 for waste storage facilities and 2 for terrace projects.

Project Name: Storm Lake Watershed
Project Sponsor: Lake Preservation Association for Storm Lake, Inc.
Length of Project: February 1, 2009 – January 31, 2012

Counties included in the project area: Buena Vista County

Total Watershed Improvement Funds awarded for this project:	**$200,000**
Total Watershed Improvement Funds spent:	**$ 30,000**
Total Watershed Improvement Funds obligated:	**$ 30,000**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$170,000**

Project objectives:

- Administer and implement all activities and objectives of the Little Storm Lake Watershed Improvement Project.
- Reduce the sediment transport by 75% and phosphorous transport by 58% from Little Storm Lake watershed (via Little Storm Lake) into Storm Lake.
- Conduct water quality monitoring and sediment analysis.
- Conduct educational and informational activities to keep the project partners and the public informed.

Summary of activities and accomplishments for calendar year 2009

An advisory committee has been formed and has met regularly.

The Request for Proposals (RFP) for engineering and design services for a fish barrier, water control structure, and pump station was written and advertised. A contract has been signed with Ducks Unlimited (DU) and the first two tasks (topographic survey and hydrologic analysis work) have been completed. The advisory committee has met with DU representatives.

Transparency readings have been collected every two weeks of the water entering and leaving Little Storm Lake. This data is the pre-construction baseline data and will be used, in part, to determine the benefits and success of the project.

Information has been provided to the two local newspapers and both have done articles at a regularly frequency to inform the local residents of the project and the progress. Photographs of DU staff conducting the survey work were included with one set of the articles. Information on the project was provided to Lake Preservation Association members in the annual newsletter. Updates have been provided on a regular basis to the Lake Improvement Commission.

Project Name: Summit Lake Watershed
Project Sponsor: City of Creston
Length of Project: January 1, 2009 to December 31, 2011

Counties included in the project area: Union

Total Watershed Improvement Funds awarded for this project:	**$ 493,117.00**
Total Watershed Improvement Funds spent:	**$ 67,464.86**
Total Watershed Improvement Funds obligated:	**$ 284,335.14**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 141,317.00**

Project objectives:

- In hopes of making Summit Lake a viable water source and recreation lake, the WIRB funds are being used to:
  - Increase education and involvement of local citizens and stakeholders in the protection of the water body.
  - Monitor water supplies visually and through water sample analysis to determine changes in water quality during and after improvements.
  - Implement upstream land best practices to reduce soil and nutrient flow into Summit Lake
  - Implement shoreline stabilization to reduce soil erosion due to wave and rainfall action along the shoreline of Summit Lake.
  - Facilitate ancillary projects proposed by the IDNR, Creston Waterworks, Southern Iowa Rural Water Association, and other organizations to improve the quality of life and fishery of Summit Lake.
- In summary, the project will improve the physical and biological condition of Summit Lake immediately after completion and over the long-term.

Summary of activities and accomplishments for calendar year 2009

During 2009, the facilitation team continued to meet with landowners about upland best practices. Dozens of landowners have been approached by NRCS staff, and some projects have been completed. BMPs included 5,675 LF of terraces, 1.3 acres of grassed waterways, and 7 water and sediment control basins. Many more projects are scheduled for 2010. At the lake, the Creston Waterworks engineered and bid the installation of 18,500 LF of riprap and related BMPs for shoreline stabilization. Work on the riprap will occur early 2010. In order to make the project more successful, Creston Waterworks collaborated with the IDNR, which lowered Summit Lake and completed a fish kill. The lowering allows for easier riprap installation and construction of fish habitat. Further, the fish kill removed thousands of undesirable fish—carp and yellow bass—that took over the lake and prevented plant growth. Toward the end of the year, work began to identify the means for water monitoring, the location for a large rain garden, and plans for water access control, including a mandated buffer strip along the shoreline of the lake.

Project Name: Volunteer Creek Watershed Improvement Project
Project Sponsor: City Of Carlisle
Length of Project: January 1, 2008 to December 31, 2010

Counties included in the project area: Warren County

Total Watershed Improvement Funds awarded for this project:	**$367,500.00**
Total Watershed Improvement Funds spent:	**$128,476.02**
Total Watershed Improvement Funds obligated:	**$239,023.98**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 0.00**

Project objectives:

1. Administer the Volunteer Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
2. Design and construction of a sedimentation basin west of Irwin Drive with associated vegetative buffer.
3. Convert the one existing storm water detention basin within the Volunteer Creek Watershed into a bio-swale.
4. Utilize storm water flow models to develop and implement standards, ordinances, and physical structures that will assist the City with the implementation of innovative watershed-based storm water control discharge measures before, during, and after development.
5. Develop a comprehensive tool-kit that includes modeling approaches, conservation sensitive design strategies, and watershed-based regulations and ordinances that were utilized for or developed as part of this project.

Summary of activities and accomplishments for calendar year 2009

- Detention basin and vegetative buffer design
  - 01/21/09 Completed sustainable design for basin located at Irwin Drive.
  - 04/29/09 Finalized sustainable basin and vegetative buffer design.
  - 12/19/09 Changes made to project design per Army Corps (ACOE) request.
  - 12/31/09 Completed changes requested by ACOE.
- Joint application submittal
  - 02/25/09 completed response to ACOE letter dated 11/10/08, providing additional information.
  - March 09-August 09 Correspondence with ACOE requesting further information.
  - 08/19/09 Sent stream/wetland mitigation report & archaeological report to ACOE.
  - 10/01/09 Resubmitted application per ACOE request.
  - 12/31/09 Submitted design changes and project narrative per ACOE request.
- Archaeological assessment
  - February 09-June 09 Correspondence with archaeologist on report status.
  - 07/30/09 Received Phase 1 cultural resource survey from archaeologist.
  - 08/19/09 Mailed Phase 1 survey to ACOE for review.
- Existing basin conversion to bio-swale
  - 04/29/09 Bio-swale design completed.
- Standards and ordinances
  - 10/13/09 Storm water ordinance begun.

Project Name: Walnut Creek Watershed Project
Project Sponsor: Montgomery & East Pottawattamie SWCD's
Length of Project: July 1, 2009 to June 30, 2012

Counties included in the project area: Montgomery & Pottawattamie

Total Watershed Improvement Funds awarded for this project:	**$489,455**
Total Watershed Improvement Funds spent:	**$99,737.48**
Total Watershed Improvement Funds obligated:	**$125,718.04**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$263,999.48**

Project objectives:

- To reduce sediment delivered to Walnut Creek by 2,000 tons.

Summary of activities and accomplishments for calendar year 2009

This was an exciting first year for the Walnut Creek Watershed. When the news spread about the watershed being funded landowners lined up to sign up for cost share. We have enough critical projects signed up that we could obligate the remaining balance of unobligated funds. This fall we constructed 72,674' of terraces, 4.6 acres of waterways, and one grade stabilization structure. We consider this to be decent numbers considering the wet fall. If we would have had favorable weather, twice as many terraces could have been constructed. Sediment delivery reductions have been outstanding however, due to projects being located in the most critical areas of the watershed. Thus far we have reduced 2,312 tons of soil from entering Walnut Creek, already surpassing our goal of 2,000. Our original goal may have been a bit conservative but we are convinced that we are putting conservation practices in the right places. Several landowners, knowing that their projects will not be funded, are putting practices in with no cost share. The conservation ethic is alive in Walnut Creek and future success for the watershed looks promising.

Yellow River Watershed Project/Direct Drain
Allamakee County Soil and Water Conservation District
Length of Project: January 1, 2008 – April 30, 2010

Counties included in the project area: Allamakee, Winneshiek

Total Watershed Improvement Funds awarded for this project:	**$ 138,000.00**
Total Watershed Improvement Funds spent:	**$ 56,300.00**
Total Watershed Improvement Funds obligated:	**$ 12,000.00**
Watershed Improvement Fund unobligated balance as of 12/31/2009:	**$ 69,700.00**

Project objectives:

- Administer the Yellow River Watershed – Direct Drain Project to ensure all objectives and activities planned are implemented
- Construct 15 grade stabilization structures that would trap sediment from approximately 1,500 acres.
- Structures would be targeted to highest priority areas, defined as those experiencing severe erosion and subsequently delivering high sediment load to the stream. These structures would reduce pollutant deliver to the stream by approximately 10,800 tons if sediment per year.
- Conduct monthly water quality sampling and record all data for comparison with sampling data collected since 2003.

Summary of activities and accomplishments for calendar year 2009

All potential sites had the necessary GIS data generated such as soils maps topog maps, distance to stream, distance to sinkholes, etc.

Contacts were made with twelve landowners interested in constructing a grade stabilization project. After field checks and soil probes conducted by the area soils scientist it was determined that four of the sites were not suitable sites due to rocky conditions, or too many sinkholes within the drainage area.

Four landowners applied and were approved for grade stabilization projects and slated for fall construction. Because of heavy rainfall making fall construction difficult the Allamakee County SWCD asked for and was granted and extension of the project agreement by the Watershed Improvement Review Board. The project completion date is now April 30th.

Despite the heavy rains, these four grade stabilization projects were completed. These sites reduced sediment delivery by an estimated 1,393 t/y. The above practices treated approximately 307 acres. One more project is approved and scheduled for Spring, 2010 construction.

A news article appeared in the Waukon Standard Newspaper covering WIRB opportunities and accomplishments. A brochure/newsletter will be sent out in April, 2010 to all landowners within the direct drain area of Yellow River Watershed detailing the two year project accomplishments. Monthly reports were presented to the Allamakee SWCD.